

REMARKS

Applicants thank the Examiner for the thorough consideration given the present application. Claims 1-31 remain in the application, and claims 7, 19, 25, 27, 29 and 31 are independent.

The Office Action date April 14, 2008 has been received and carefully reviewed. Rejections were made of all claims for being indefinite and prior art was applied to some claims. Applicants appreciate that a number of claims have been indicated as containing allowable subject matter, and that they would be allowable subject to obviation of the indefiniteness. By this reply, Applicants have responded to each issue raised in the Office Action in an attempt to respond to the indication of allowable subject matter so that prosecution can proceed toward allowance without unnecessary delay. Favorable reconsideration and allowance of the present application are respectfully requested in view of the following remarks.

Priority Under 35 U.S.C. § 119

The Examiner has not acknowledged Applicant's claim for foreign priority under 35 U.S.C. § 119, and receipt of the certified priority document. Acknowledgment thereof by the Examiner in the next Office Action is respectfully requested.

Information Disclosure Statements

Applicants thank the Examiner for considering some of the references supplied with the Information Disclosure Statement filed along with the application and the second IDS filed December 26, 2006, filed responsive to the European Search Report dated October 27, 2006. A number of the references cited therein appear to have been lined out as if they were not considered. Applicants believe that the references cited therein were in compliance with all of the requirements of 37 C.F.R. § 1.97 and 1.98 and therefore request that the Examiner either consider the remaining references and return the appropriately marked SB 08 forms with the next Office Action or indicate the basis for any refusal to consider the references so that Applicants may respond appropriately.

Claim Rejections – 35 U.S.C. § 112, 2nd paragraph

Claims 1-31 stand rejected under 35 U.S.C. § 112, the second paragraph, as allegedly indefinite. This rejection is respectfully traversed.

In order to overcome this rejection, Applicants have amended claims 1-31 to correct each of the deficiencies specifically pointed out by the Examiner. Applicants respectfully submit that the claims, as amended, particularly point out and distinctly claim the subject matter which Applicants regard as the invention. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Claim Rejections – 35 U.S.C. § 102

Claims 1-8 and 19 stand rejected under 35 U.S.C. § 102(b) as allegedly unpatentable over U.S. Patent No. 6,463,369 to Sadano et al. (“Sadano”). Applicants submit that the Examiner has failed to establish a *prima facie* case of anticipation and respectfully traverse the rejection. A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

In order to establish *prima facie* anticipation under 35 U.S.C. § 102, the cited reference must teach or inherently include each and every element of the claims. *See M.P.E.P. § 2131; M.P.E.P. § 706.02.*

In the present invention, a feed forward control is performed to suppress position deviation of a vehicle. A guide line is set on a road surface to define a running route and a set of line formation elements. A data acquisition operation signal is transmitted from the vehicle to the guide line. The line formation element outputs position data in response to the signal and the vehicle receives the position data.

Claims 7 and 19 have now been amended to make clear that they are directed to a vehicle guided along a running route without contact with a guide rail. The vehicle includes, *inter alia*, a control system that generates a provisional steering angle based on a current target deviation from a running route at a current position of said vehicle, a current actual deviation from said

running route at said current position of said vehicle, and a current target steering angle at said current position of said vehicle.

The rejection states that Sadano includes a control unit 10, a vehicle speed sensor 22, a longitudinal acceleration sensor 23 and a steering angle sensor 21. While the reference may have these features, they are not the features required by the claims. Both claims require that the control means generates a number of control instructions “based on” a current position of the vehicle. This is a feed forward control. The control means generates a provisional steering angle based on a current target deviation from a running route at a current position of said vehicle, a current actual deviation from said running route at said current position of said vehicle, and a current target steering angle at said current position of said vehicle. Sadano does not have feed forward control and does not create control instructions based upon position. Sadano, among other things, never generates a “current target deviation” based on position, never generates a provisional steering angle, and never generates a current actual deviation. To the contrary, Sadano does not desire a target deviation as it uses an image processing technique, column 3, lines 32-41, to calculate side deviation and optimizes the cornering to return to the white line it is following, not a deviation from that line based upon position. Therefore, Applicants respectfully submit that the combination of elements as set forth in independent claims 7 and 19 is not disclosed or made obvious by the prior art of record, including Sadano, for the reasons explained above. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

With regard to dependent claims 1-6 and 8, Applicants submit that claims 1-6 and 8 depend, either directly or indirectly, from independent claim 7 which is allowable for the reasons set forth above, and therefore claims 1-6 and 8 are allowable based on their dependence from claim 7, as amended. Reconsideration and allowance thereof are respectfully requested.

Claim Rejections – 35 U.S.C. § 103

Claims 29-31 stand rejected under 35 U.S.C. § 103(a) as allegedly unpatentable over Sadano. Applicants submit the Examiner has failed to establish a *prima facie* case of obviousness and respectfully traverse the rejection. A complete discussion of the Examiner's rejection is set forth in the Office Action, and is not being repeated here.

In order to establish *prima facie* obviousness under 35 U.S.C. § 103(a), the cited references must teach or suggest each and every element in the claims. See *M.P.E.P.* § 706.02(j); *M.P.E.P.* 2141-2144.

Claim 29 requires, *inter alia*, a method of steering a vehicle guided along a running route without contact with a guide rail, comprising setting of a 1-dimensional coordinate data of a target route; setting of a target steering angle corresponding to said 1-dimensional coordinate data $[X_j]$, detecting a current deviation between said target routes and a current position of a vehicle main body; generating a control steering angle corresponding to said current deviation and said target steering angle.

Sadano, to the contrary, uses data from a 3-dimensional scene analysis and calculation to determine a feedback correction amount based upon where the white line is going in the distance ahead, not a current position of a vehicle main body based upon 1-dimensional coordinate data. Therefore, Applicants respectfully submit that the combination of elements as set forth in independent claim 29 and dependent claim 30, is not disclosed or made obvious by the prior art of record, including Sadano, for the reasons explained above. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Claim 31 requires, *inter alia*, a steering method of a vehicle guided along a running route without contact with a guide rail, wherein a drive section comprises a motor, a ball screw axis connected with an output axis of said motor, and a nut connected with the ball screw axis, a clutch interposed between said motor and said ball screw axis, and a link mechanism connected with said wheels and configured to operate a rotation of the output axis of said motor, and wherein the steering method further comprises detecting a contact between a part of said vehicle with a road surface side structure; and disengaging said clutch interposed therebetween in response to the contact. Sadano does not disclose a drive section that comprises a motor, a ball screw axis connected with an output axis of said motor, and a nut connected with the ball screw axis, a clutch interposed between said motor and said ball screw axis, and a link mechanism connected with said wheels and configured to operate a rotation of the output axis of said motor. Moreover, Sadano never discloses any mechanism that can detect a contact between a vehicle part and a road surface side structure, therefore it cannot disengage a clutch responsive to

something that cannot happen. The rejection lays out no factual basis that would establish that the structure is present or would be "operated by the same method." Therefore, Applicants respectfully submit that the combination of elements as set forth in independent claim 31 is not disclosed or made obvious by the prior art of record, including Sadano, for the reasons explained above. Accordingly, reconsideration and withdrawal of this rejection are respectfully requested.

Conclusion

All objections and rejections raised in the Office Action having been properly traversed and addressed, it is respectfully submitted that the present application is in condition for allowance. Applicants therefore respectfully request that the Examiner reconsider all presently outstanding rejections and that they be withdrawn. It is believed that a full and complete response has been made to the outstanding Office Action, and as such, the present application is in condition for allowance. Notice of same is earnestly solicited.


Prompt and favorable consideration of this Amendment is respectfully requested.

If the Examiner believes, for any reason, that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Paul T. Sewell, Registration No. 61,784, at (703) 205-8000, in the Washington, D.C. area.

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.14; particularly, extension of time fees.

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Respectfully submitted,

By 

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